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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Darrrell T. McKenzie — Examiner: Terry K. Cecil

Serial No.: 09/965,806 — Group Art Unit: 1723

Filed: October 1, 2001

Title: COMBINATION FILTER ELEMENT SUPPORT AND ANTI-PREFILL VALVE

APPEAL BRIEF

Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Further to the Notice of Appeal filed May 21, 2001, herewith are three copies of Appellants' Brief on Appeal. A check for the statutory fee of $330.00 fee for filing an Appeal Brief is enclosed. This is an appeal from the Final Rejection of January 21, 2004, a reply to which filed on April 21, 2004 was not considered persuasive by the Primary Examiner in an Office Communication of April 30, 2004.

(1) REAL PARTY IN INTEREST

The real party in interest in the present application is Dana Corporation, the named Assignee.

(2) RELATED APPEALS AND INTERFERENCE

There are no known related appeals or interferences.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on: August 23, 2004
Name: Janet M. Jacobs
Signature: Janet M. Jacobs

(3) STATUS OF THE CLAIMS

During the prosecution of the instant application, claims 1-11were originally presented for examination. Claims 1-11 remain pending. Claims 1-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hultgren et al. '666 in view of Buckman '023 or in view of Turman '564. A copy of all the pending claims is presented in the Appendix.

(4) STATUS OF AMENDMENTS AFTER FINAL

Following the Final Rejection in the Office Action of January 21, 2004, Appellant submitted a Reply on April 21, 2004, in which no amendments to the claims were made.

(5) SUMMARY OF THE INVENTION

The present invention is directed to a combination filter element support and anti-prefill valve for use with an annular filter element 15 having an annular filter media 16 with a hollow core 20 and disposed within a housing 14. The housing 14 is closed by an end plate 24 having a central "spin-on" outlet opening 28 and a plurality of spaced radially disposed inlet openings 30.

A single piece unitary body is provided having an axially extending annular portion 44, wherein the annular portion 44 has at one end an annular shoulder 48 extending radially therefrom for supporting the filter element 15. A sealing section 50 which engages the end plate 24 over a continuous location is coaxial with the central spin-on opening 28.

The unitary body includes a radially extending plate portion 46 defined by a web portion 58 and a peripheral portion disposed at a second end of the annular portion 44. The plate portion 46 is supported in spaced relation to the end plate 24 only at the peripheral portion of plate portion 46. The web portion has an axially positioned, one way valve 40 unitary therewith which

opens in an axial direction toward the spin-on opening 28. The one way valve 40 is normally closed to prevent oil or fuel from flowing through the central spin-on opening 328and into the hollow core 20 of the filter element 15 and opens when fluid is being circulated and flows out of the filter element under pumping pressure.

In a more specific aspect of the invention, the one way valve 40 is a purse valve comprising lips 64 and 66 which intersect along a line 68 whereby fluid pressure in the hollow core 20 separates the lips 64 and 66 which project away from the hollow core 20 and are biased together at the line 68, whereby fluid pressure in the hollow core 20 separates the lips to open the one way valve 40 and fluid pressure outside of the filter element 15 applied against the lips 64 and 66 urges the lips into engagement along the line 68 to keep the one way valve 40 closed.

A copy of all the pending claims is presented in the Appendix.

(6) ISSUES

The sole issue outstanding in this application is:

Whether claims 1-11 which have been finally rejected under 35 U.S.C. §103(a) is obvious over Hultgren et al. '666 in view of Buckman '023 or Turman '564.

(7) GROUPING OF THE CLAIMS

Independent claim 1 and dependent claims 2, 9, 10 and 11 stand or fall together and dependent claims 3, 4, 5, 7 and 8 stand or fall together. Independent claims 1, 2, 9, 10 and 11 are directed to a filter element having a unitary body defined by a web portion and a peripheral portion having an axially positioned one way unitary valve therein which remains closed to prevent oil or fuel from flowing through the central spin-on opening into the core of the filter element.

Claims 3, 4, 5, 7 and 8 recite a one way valve wherein the one way valve is a purse valve comprising lips which intersect along a line and therefore do not stand or fall with claims 1, 2

and 9-11.

(8) APPELLANTS' ARGUMENTS

Claims 1-11 have been finally rejected under 35 U.S.C. §103(a) as being obvious over Hultgren et al. '666 in view of Buckman '023 or Turman '564. Appellant respectfully traverses this rejection.

Considering first the primary reference, Hultgren '666, it is respectfully submitted that Hultgren does not disclose a "unitary body being of a single piece." Rather, Hultgren et al. discloses an integral body of at least three pieces, i.e., an anti-drainback valve 76 made of an elastomeric material; an annular metal insert 92 used to stiffen the top of the valve 76, and a metal filter support member which engages the anti-drainback valve 76 with an inturned rib 62 received in a circumferential slot 90. The reenforcement member 92 is held in place by "any suitable means such as adhesive cement and the like." Clearly, this is relatively complex structure in which separate parts must interact in order for the anti-drainback valve 46 to be properly supported and to properly function.

In Appellant's claimed invention there is no need for a recess such as the recess 90 in the valve and no need for a turned in horizontal rim 62 for receipt in the circumferential slot 90. Moreover, there is no need for an L-shaped reenforcement member 92 that has to be glued or otherwise attached to the valve. Rather, Appellant's axially positioned one way valve is unitary with the axially extending plate portion 46 and with a support portion 44. There is nothing in Hultgren et al., which teaches that the valve 46 could be unitary with a support which supports both the filter

element and the valve.

In addition, there is no suggestion anywhere in Hultgren et al. '666 of the one way valve 46 having the function of:

> "closing to prevent oil or fuel from flowing through the central spin-on opening and into the hollow core of the filter element and opening when fluid is being circulated under pumping pressure."

In Hultgren et al. the one-way valve is an anti-drainback valve, not an anti-prefill valve which prevents a filter from being filled with old or used oil by an unscrupulous mechanic or service station. Hultgren et al. is silent with respect to this issue and considers only a single purpose for the filter, i.e., preventing oil remaining in the filter from draining out of the filter when the engine is not running. There is absolutely no suggestion in Hultgren et al. at all of this concept.

It is respectfully submitted that neither Buckman '023 or Turman '564 cure the deficiencies of Hultgren et al. as a reference against Appellant's claims. Buckman '023 does not disclose either an anti-prefill valve or an anti-drainback valve which closes downstream of the filter media in order to either prevent liquid from draining from the core of a filter element or to prevent a valve from being prefilled. Moreover, Buchman '023 does not support his web-like structure provided by the flange 21a at the periphery of the flange.

The only reason one would combine Buckman et al. with Hultgren et al. is to formulate a rejection of Appellant's claims after reviewing the claims. There is no disclosure in Buckman et al. suggesting that one skilled in the art would combine Buckman with Hultgren et al. for any reason, let alone to make the anti-drainback valve 46 of Hultgren et al. a single piece, unitary valve structure. Buckman et al. teaches a completely different type of valve in which the core of a filter is always

open, rather than a filter in which the core of the filter element therein is closed when the filter is not operating to filter a liquid. Moreover, one would clearly not use Buckman et al as an anti-prefill valve because the filter element support is completely open with respect to the core of the filter.

Turman '564 does not cure the deficiencies of Hultgren et al. as a reference against Appellant's claims either. This is because while Turman discloses a unitary body 78 which closes against return flow, Turman does not disclose a radially extending plate portion, such as Appellant's plate portion, which is only supported around the periphery thereof as is set forth as follows in claim 1:

> the unitary body including a radially extending plate portion (46) defined by a web portion (58) and a peripheral portion (59) at the second end of the annular portion (44) the plate portion (46) being supported in spaced relation to the end plate only at the peripheral portion of the end plate (numerals and emphasis supplied).

Rather, Turman discloses a purse-type valve with a radial portion that is completely supported outboard of the converging lips of the plate valve. It is respectfully submitted that Turman does not disclose structure which would cure the deficiencies of Hultgren et al. as a reference against Appellant's claims. This is because Turman teaches that the plate portion must be supported on both sides 5 thereof, inboard of the periphery of the plate portion, rather than only at the periphery of the plate portion.

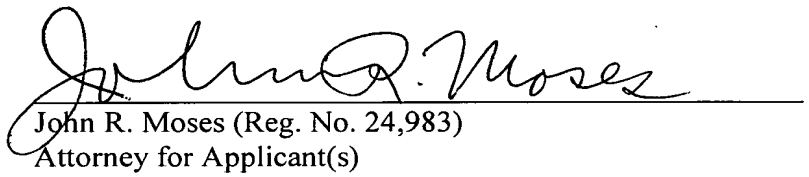
There is nothing other than Appellant's disclosure that would teach or suggest to one skilled in the art of making filters a combination with Turman '564 with Hultgren '666. One skilled in the art would have to further modify Turman by removing the mounting plate 58 therefrom so that Appellant's claimed plate portion 46 would be supported only at the periphery thereof rather than on the top and bottom sides thereof. Clearly, there is no suggestion in either

Hultgren et al. '666 or Turman '564 that this be done. Accordingly, the Final Rejection does not establish a *prima facie* case of obviousness and should be withdrawn.

(9) Conclusion

In view of the arguments and authorities presented above, Appellants request that the Examiner's action in making and maintaining the Rejection under 35 USC §103(a) of claims 1-11 be reversed and that the application be allowed.

Respectfully submitted,



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APPENDIX

Claim 1. (Previously Presented) A combination filter element support and anti-prefill valve for use with an annular filter element having an annular filter media with a hollow core and disposed within a housing, wherein the housing is closed by an end plate having a central spin-on outlet opening and a plurality of spaced radially disposed inlets, the combination comprising:

a unitary body having an axially extending annular portion, wherein the annular portion has at one end an annular shoulder extending radially therefrom for supporting the filter element, and a sealing section which engages the end plate over a continuous location which is coaxial with the central spin-on opening, the unitary body being of a single piece, and

the unitary body including a radially extending plate portion defined by a web portion and a peripheral portion, at a second end of the annular portion the plate portion being supportetd in spaced relation to the end plate only at the peripheral portion of plate portion, the web portion having an axially positioned one way valve unitary therewith which opens in an axial direction toward the spin-on opening, the one way valve closing to prevent oil or fuel from flowing through the central spin-on opening and into the hollow core of the filter element and opening when fluid is being circulated is under pumping pressure.

Claim 2 (Previously Presented) The combination of claim 1 wherein the annular portion is extends axially into the hollow core.

Claim 3 (original) The combination of claim 1 wherein the one way valve is a purse valve comprising lips which intersect along a line, the lips projecting away from the hollow core and being biased together at the line, whereby fluid pressure in the hollow core separates the lips along the line to open the one way valve and fluid pressure outside of the filter element applied against the lips urges the lips into engagement along the line to close the one way valve.

Claim 4 (original) The combination of claim 3 wherein there are two lips, the two lips being joined by web portions which flex, allowing the two lips to part along the line providing an opening through which the fluid flows.

Claim 5 (original) The combination of claim 4 wherein the radially extending plate portion is disposed in spaced relation to the annular shoulder at an end of the annular portion opposite the sealing section to define a chamber for receiving the one way valve.

Claim 6 (original) The combination of claim 5 wherein the unitary body is made of rubber.

Claim 7 (original) The combination of claim 6 wherein the filter element support and anti-prefill valve are in further combination with a filter cartridge having the annular filter element therein and wherein the annular filter media is a media for filtering engine lubricating oil or fuel.

Claim 8 (original) The combination of claim 3 wherein the filter element support and anti-prefill valve are in further combination with a filter cartridge having the annular filter element therein and wherein the annular filter media is a media for filtering engine lubricating oil or fuel.

Claim 9 (original) The combination of claim 1 wherein the filter element support and anti-prefill valve are in further combination with a filter cartridge having the annular filter element therein and wherein the annular filter media is a media for filtering engine lubricating oil or fuel.

Claim 10 (original) The combination of claim 1 wherein the radially extending plate portion is disposed in spaced relation to the annular shoulder at an end of the annular portion opposite the sealing section to define a chamber for receiving the one way valve.

Claim 11 (original) The combination of claim 1 wherein the unitary body is made of rubber.